



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/821,806

04/09/2004

Chung-Shih Tang

40000212-0001-002

9054

26263

7590

01/22/2008

SONNENSCHN NATH & ROSENTHAL LLP

P.O. BOX 061080

WACKER DRIVE STATION, SEARS TOWER

CHICAGO, IL 60606-1080

EXAMINER

HAYES, KRISTEN C

ART UNIT

PAPER NUMBER

3643

MAIL DATE

DELIVERY MODE

01/22/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/821,806	Applicant(s) TANG ET AL.	
	Examiner Kristen C. Hayes	Art Unit 3643	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26, 29 and 30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26, 29 and 30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 August 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the irrigation system, means of collecting irrigation water, means of storing irrigation water, the housing and the evaporation-protective layer must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Art Unit: 3643

3. Claims 4, 11 and 24-26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
4. Claims 11 and 24 recites the limitation "the platform". There is insufficient antecedent basis for this limitation in the claim.
5. Regarding claim 4, it is unknown what the term "PCB" refers to. This acronym could refer to a number of things such as a company name, a chemical compound, etc. The term renders the claim indefinite.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-3, 6-15, 20-26 and 30 are rejected under 35 U.S.C. 102(e) as being anticipated by Becker US 2004/0255513.
8. Regarding claim 1, Becker discloses a plant cultivation system for growing salt-tolerant terrestrial plant (Becker, ¶0043: lines 44-51) in saline water comprising a plant support comprising a flexible buoyant portion (10) (Becker, ¶0044: lines 1-13) and at least one salt

Art Unit: 3643

tolerant plant in contact with the plant support, wherein at least a portion of the plant contacts the saline water (Becker, Figures 2A, 3A).

9. Regarding claims 2 and 3, Becker further discloses the saline water comprising pond water from a pond (Becker, ¶¶0042: lines 1-3).

10. Regarding claim 4, Becker further discloses the saline water containing an organic pollutant (Becker, ¶¶0053).

11. Regarding claim 5, Becker further discloses the saline water comprising cadmium (Becker, ¶¶0054).

12. Regarding claim 6, Becker further discloses the plant support comprising a sheet material (16) in contact with a buoyant edge (14).

13. Regarding claim 7, Becker further discloses the plant support comprising a growth medium (Becker, ¶¶0045: lines 5-9).

14. Regarding claim 8, Becker further discloses (as best understood) the growth medium at least being partially contained in a housing (considered the sheet material of 16).

15. Regarding claim 9, Becker further discloses the buoyant portion further including growth medium (Becker, ¶¶0045: lines 5-9).

16. Regarding claim 10, Becker further discloses the sheet being capable of being suspended at the surface of a body of saline water with at least one buoyant support member being in contact with the sheet (Becker, Figures 2A, 3A).

17. Regarding claim 11, Becker further discloses (as best understood) the buoyant support member forming a supporting structure (14) for the platform.

18. Regarding claim 12, Becker further discloses the buoyant support member comprising plastic (Becker, ¶¶0044: lines 5-13)

Art Unit: 3643

19. Regarding claim 13, Becker further discloses the sheet consisting of woven material (Becker, ¶0045: lines 3-5).

20. Regarding claim 14, Becker further discloses a space for growth of a terrestrial plant is present in a region between two buoyant support members (14) (Becker, Figures 2A, 3A).

21. Regarding claim 15, Becker further discloses an irrigation system (Becker, ¶0005: lines 8-11, Figures 3A, 3B).

22. Regarding claims 20 and 21, Becker further discloses a growth medium comprising peat and a salt-tolerant terrestrial plant and at least one buoyant support member supporting the growth medium (Becker, ¶0045, Figures 2A, 3A).

23. Regarding claim 22, Becker further discloses (as best understood) the growth medium being contained in a housing of woven material (considered the sheet material of 16) (Becker, ¶00445).

24. Regarding claim 24, Becker further discloses the salt-tolerant terrestrial plant comprising plant material which is contacted by the saline water (Becker, Figures 2A, 3A) and wherein at least one plant is grown from the plant material while the platform is in the saline water (Becker, ¶0006: line4).

25. Regarding claim 25, Becker further discloses the plant material being a whole plant.

26. Regarding claim 26, Becker further discloses the plant material directly contacting the saline water (Becker, Figures 2A, 3A).

27. Regarding claim 30, Becker further discloses the plant being a cultivated crop plant (Becker, ¶0043: lines 44-45). Many species of *Spartina* are known to be cultivated for livestock feed. Therefore, Becker is seen as meeting the limitations of the claim.

Claim Rejections - 35 USC § 103

28. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

29. Claims 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Becker in view of Raskin et al. US 5,876,484.

30. Regarding claims 16 and 17, Becker discloses a device with the limitations of claim 15 but does not disclose the irrigation system delivering evaporative water rainwater, etc. Raskin discloses an irrigation system that delivers fresh water and nutrients to the plant (Raskin, column 10: lines 55-59). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify irrigation system of Becker to deliver fresh water and nutrients to the plant depending on the plants need for such.

31. Regarding claims 18 and 19, Becker in view of Raskin discloses a device with the limitations of claim 17. Raskin further discloses a means of collecting and storing the irrigation water (87). It would have been obvious to one of ordinary skill in the art at the time of the invention to further modify the device of Becker to include a means of collecting and storing the irrigation water so that the water could be easily accessed when needed.

Response to Arguments

32. Applicant's arguments with respect to claims 1-30 have been considered but are moot in view of the new ground(s) of rejection.

Art Unit: 3643

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kristen C. Hayes whose telephone number is 571-270-3093. The examiner can normally be reached on Monday-Thursday, 7:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Poon can be reached on (571)272-6891. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KCH
16 January 2008

Peter Poon
Examiner
Art Unit 3643

/Peter M. Poon/
Supervisory Patent Examiner, Art Unit 3643